

# **TREAT**

## **Treatments for Restoration**

### **Economic Analysis Tool**

#### **User Guide**

**Modeling Jobs and Labor Income Associated with  
CFLR/N Funds and Full Projects  
For Use In Project Proposals, Work Plans, And Annual  
Reports**



**October 11, 2011**

# Table of Contents

Introduction .....	1
Methodology .....	1
Using TREAT.....	3
Step 1: Download TREAT.....	4
Step 2: Enter project details .....	4
Tab 1: (CFLR/N Project Details) .....	4
Tab 2: Full Project Details (All Funds) .....	8
Step 3: Send the completed data entry spreadsheet to the economists supporting the CFLR teams .....	11
Where to Get Help.....	12
Summary .....	12
Appendix A: CFLR/N Fund Only TREAT Data.....	13
Funding and Employment (CFLR/N Funds Only).....	13
Distribution of Contracted Funding (CFLR/N Funds Only).....	13
Harvest Volume over the Life of the Project (CFLR/N Funds Only):.....	14
Product Distributions .....	14
Appendix B: Full Project TREAT Data .....	15
Funding and Employment (All Funds) .....	15
Distribution of Contracted Funding (All Funds).....	15
Harvest Volume over the Life of the Project (All Funds):.....	16
Product Distributions .....	16

***NOTE: TREAT was developed to provide a standardized approach of computing jobs and income for CFLRP proposals, work plans, and annual reports to allow easier comparison across teams. It was not developed for use in other project or landscape analyses, and it is strongly advised that it NOT be used for that purpose. For help in conducting project-, landscape-, or forest-level impact analysis outside of the CFLRP program, please contact your Regional Economist or Social Science coordinator, if available in your region, or contact one of the WO EMC economists listed in the section of this User's Guide entitled "Where to Get Help" (page 7).***

## Introduction

The Omnibus Public Land Management Act of 2009 includes Title IV: Forest Landscape Restoration. The purpose of this title is to conduct ecosystem restoration that encourages economic and social sustainability, leverages local resources with national and private resources, reduces wildfire management costs, and addresses the utilization of forest restoration byproducts to offset treatment costs and benefit local economies (<http://www.fs.fed.us/restoration/CFLR/index.shtml>). Title IV established the Collaborative Forest Landscape Restoration Program (CFLRP), which provides funding to cover up to 50 percent of ecological restoration treatments on National Forest System (NFS) lands. The proposal requirements sent to Regional Foresters on February 24, 2010 identified multiple topics to be addressed. The investments section specifically asks "Will jobs be created? If so, what kind, how many, and for how long?" The teams selected to receive funding are then required to complete a work plan and annual reports that also require teams to estimate jobs created/maintained.

Given the varying degrees of economic capacity among teams preparing CFLRP proposals, a tool was developed to standardize the approach of estimating the number of jobs that would be supported by restoration efforts. Having a standardized approach allows for a basis of comparison across teams and for consistent reporting of CFLR program accomplishments. If teams used different methodologies to estimate the number of jobs created, it would be difficult to compare the impacts. The Treatments for Restoration Economic Analysis Tool (TREAT) was developed to address this problem. TREAT provides teams with a standard interface to estimate employment and labor income impacts from proposed restoration activities. This User Guide explains the methodology and functionality of TREAT as applied to CFLRP projects.

## Methodology

TREAT is a modeling tool used to assist in the estimation of the economic effects (jobs and labor income<sup>1</sup>) of restoration activities tied to the CFLRP. TREAT was designed to provide a standardized approach for impact estimation and to streamline data entry and preparation for the generation of economic impact tables to be used in CFLRP proposals, work plans, and reports. It consists of: 1) data entry worksheets to be filled out by the teams, 2) a Microsoft Excel workbook that serves as the interface between user inputs and data from an existing economic impact model, for use by the economists supporting the teams (see the section "[Where to Get Help](#)"), and 3) worksheets reporting the economic impacts of the restoration strategy (provided to the teams by the economists). The section of this User's Guide entitled "Using TREAT" contains

---

<sup>1</sup> Jobs are average annual employment and can be full time, part time, and temporary workers. Labor Income is the value of wages and benefits plus income to sole proprietors.

instructions for filling out the TREAT data entry sheets for 1) [CFLR/N funds only \(Tab 1\)](#) and 2) [All funds \(Tab 2\)](#).

Economic impact analysis estimates the effects of restoration activities on local or regional employment and labor income levels. The relative size of the modeled economy plays an important role in the estimate of impacts on jobs and income and should ideally be customized based on commuting data suggesting a functioning economy and where the wood products are likely to be processed (log flows). However, due to the short turnaround for the FY 2010 and FY 2011 CFLR proposals and since CFLR proposals were being submitted from forests around the country, to simplify the analysis, economic models were originally built for each FS region. These regional economic models have now been replaced with project-level models (groups of counties that represent the areas where the estimated impacts are likely to occur). In general reducing the size of the modeled economy will reduce the multiplier effects, leading to smaller impact estimates.

Economic models were built using information from the Bureau of Business and Economic Research, IMPLAN software, and economic data. IMPLAN is an input-output model that represents the activity within an economy. Changes in one or more economic components ripple through the economy and can affect employment and income levels in a variety of sectors. For example, an increase in the level of wood product harvesting allowed in an area will likely require logging companies to hire more labor to perform the additional harvesting and transportation associated with the increased extraction levels. Increases in employment will also increase the total wages paid by the companies, which will raise total income. Thus, in this example, firms within the logging industry are reacting directly to the increased extraction of the timber resource. Similarly, now that there is more wood product volume on the market, local sawmills will likely have to compensate by increasing employment to handle the added volume. Thus, both logging and sawmill businesses must react to the increase in local timber harvesting. Such impacts to industries occurring from a change in local production are referred to as “direct effects.” In other words, these are the impacts (i.e. change in employment) resulting from the changes in expenditures and/or production values caused by a policy to increase the timber harvested in the area. Data used to estimate the direct effects from the timber harvest and processing were provided by the University of Montana’s Bureau of Business and Economic Research (Morgan et al. 2007). This national data is broken into multi-state regions and is considered more accurate than that which is available from IMPLAN. The Bureau’s data represents the results of mill censuses that correlate production, employment, and labor income. The direct impacts from other restoration work, such as road decommissioning or prescribed burning, were calculated using IMPLAN. IMPLAN was also used to model the indirect and induced effects, explained below.

In addition to hiring more labor, industries must meet production requirements by purchasing more equipment, supplies, labor and other inputs. Some of these purchases will be made from other local industries; for example, additional fuel purchased by the logging companies at local gas stations increases the output in the oil and gas industry. Thus, the local gas stations may respond to the increased demand for fuel by hiring additional labor, which also affects total income in the study area; such impacts are called the indirect effects. Thus, the “indirect effects” are the changes in inter-industry purchases as they respond to the new demands of the directly affected industries. Another type of effect is referred to as “induced effects.” The induced effects reflect changes in spending ability of individual households as income increases or decreases due to changes in production. For example, an increase in employment in the sawmill sector or the local gas station will be filled by unemployed individuals in the area and/or the in-migration of

new households; and the increased income to those individuals will stimulate an increase in their demand for goods and services in the local area, which in turn may cause firms to respond by increasing employment and output.

Similar to impacts on employment, the income in the study area will be affected according to the activities associated with each alternative. “Labor income” is the sum of wages, the value of benefits and the income of sole proprietors. Labor income changes along with local employment levels. As described in the case of employment impacts, labor income is generated through direct, indirect, and induced effects. Definitions for these effects are the same as stated above. Direct, indirect and induced effects may be summed up in order to estimate a total effect. The employment and labor income reported in TREAT are direct and total effects. The interpretation of the results will depend upon whether you are modeling only CFLR/N funds or all funds (both are required in the annual report, requiring the teams to fill in two data entry sheets). When modeling CFLR funds only, not including matching funds, the results from TREAT will be direct and total effects attributable to CFLR Funds. When you complete your 2<sup>nd</sup> worksheet based on both CFLR Funding and matching funds, the results will be direct and total effects attributable to all funds. More detail regarding filling in the data entry sheet is provided in the “Using TREAT” section below.

The data from IMPLAN models for unique CFLR Project impact area county groupings have been imported into TREAT as “response coefficients”. Response coefficients report the impacts to jobs and income per a specified unit of a restoration treatment activity. When combined with the user data from the data entry sheet, these response coefficients represent how that activity would cause ripples through the economy, impacting employment and income levels.

It is important to note that IMPLAN is a static model. In other words it represents a snapshot in time. The data used in the IMPLAN models underlying TREAT are for the year 2009. The models represent the state of the economy in that year; therefore any changes in the economy since that time are not reflected in the model. It also important to note the employment impacts are reported simply as jobs, not full time equivalents (FTE’s). The impacts include both full time and part time employment; therefore, a person with more than one job could show up more than once in the data. This prohibits comparisons to population data and inferences about the effect on unemployment rates.

## Using TREAT

This section explains the operation of TREAT and interpretation of the results. The newest version of TREAT has been set up so that teams fill out data entry worksheets in an Excel spreadsheet (one for CFLR/N funds only and one for CFLR/N funds plus all matching funds) and send them to one of the economists supporting the CFLRP teams (see the section [“Where to Get Help”](#)). The most important component of using the tool is entering user data into the data entry worksheet. If data is input incorrectly, the results will not be representative of economic impacts that may occur with the restoration activities.

The worksheets provided to the CFLR teams contain four tabs titled, “CFLR-CFLN Project Details”, “Full Project Details”, “CFLR-CFLN Fund Impacts,” and “Full Fund Impacts.” The “Project Details” worksheets are the data entry sheets where the user will input all the CFLR/N fund and full project data associated with restoration activities, respectively. Likewise, the “CFLR-CFLN Fund Impacts” and “Full Fund Impacts” are where the output will be reported after the analysis is completed by the economists. The summary tables on these sheets may be cut and

pasted directly into proposal and reporting documents. The remainder of this section goes into greater detail on the mechanics of these worksheets.

## Step 1: Download TREAT

In the future, there will be a link on the CFLR webpage to download new versions of TREAT as it is updated. However, for now, the data entry spreadsheets will be emailed to each team.

## Step 2: Enter project details

The first task is to enter information about the project. This data will be entered into either Tab 1 (for modeling CFLR/N funds only) or Tab 2 (for modeling all funds). Data requirements are broken down into four categories: Funding and Employment, Contract Funding Distributions, Amount of Harvest Volume, and Harvest Processed by Firms in the Model Area. Each of these categories has specific data requirements which are discussed in detail below. To see where the data are entered, match the numbers for each data requirement described below with the number listed in the corresponding table. For example, number “1” under Funding and Employment should be entered into the box numbered “1” in Table 1. Data are entered in the cells shaded in green. The remaining cells are for calculation purposes only.

### *Tab 1: (CFLR/N Project Details)*

#### Funding and Employment (CFLR/N Funds Only) – Table 1

This section is where the analyst enters data regarding the proposed funding, length of the project, contracted work and monitoring. TREAT averages this data so that impacts are based on annual activities levels. We expect that TREAT modeling by each team will improve as they progress from proposal through the work plan and use the tool for each annual report. To estimate only the CFLR/N fund contributions, you may decide at the proposal phase to estimate totals and then take the appropriate portion of total funding, FTEs and wood product outputs that correspond to the CFLR Funds requested. As you move through time, and note which codes are used for which portions of your land management projects, you may be more capable of providing fund-specific TREAT inputs. The specific data requirements are as follows (please refer to the tables below for reference to where the data should be entered):

1. “Enter Total CFLR/N Funding” in Box 1. This is **only the CFLR Funds requested in your proposal or those for the year or years for which you are reporting.** For proposals and work plans, include all ten years of funding. For annual reports, include only funding for the year for which you are reporting. It does not include matching funds. Matching funds consist of: Forest Service appropriated funds, Forest Service permanent trust funds, partnership funds, partnership in kind services, and other (if applicable). For example, if the proposal is asking for \$4 million of CFLR funds per year for 10 years, with another \$4 million dollars per year for 10 years of matching funds, then the amount entered into Box 1 would be \$40 million.
2. “Enter the number of years for project implementation” in Box 2. This is the number of years that restoration activities will take place. For proposals and work plans enter the full implementation period (usually 10 years). For annual reports, enter “1”. (For instance, if using TREAT to model FY 2012 impacts, enter the CFLR/N funds for FY 2012 in Box 1 and “1” year in Box 2).

3. “Enter the percent of CFLR/N Funds reported in Box 1 that is going to be used for partnerships and contracted work within the impact area )...” – Box 3. This is the percent of CFLR/N funds that will be spent on work completed by partners and contractors. A comment box is provided that lists the counties included within the impact area for your forest or forests. Only those firms located within this impact area should be included. Firms based outside the impact area will contribute to leakage. Leakage is money leaving the economy due to the import of goods and services. Purchasing a service from a partner or contractor outside of the region is the same as importing those services. Once that money leaves the economy then it is no longer available for circulation and may not generate additional jobs and income locally.
4. “Enter percent of the CFLR/N Funds that is going to be used for Force Account Monitoring” – Box 4. This is the percent of funding that will be spent on implementation and monitoring conducted by Forest Service employees. (Note: The sum of the percentages for numbers 3 and 4 must be less than or equal to 100 percent).
5. “Enter Annual Force Account FTEs for Implementation & Monitoring” – Box 5. This is the number of Forest Service employees per year that will be used for implementation and monitoring during the life of the project. Again, this should reflect the CFLR/N Funds only, or the portion of total attributable to the fund (e.g., 50%). Fractional employees may be reported. For example if one-half of an FTEs time will be spent on implementation and monitoring then the 0.5 should be entered. For seasonal employees, estimate the percentage of the year that each employee will be involved in implementation and monitoring and multiply times the number of seasonal employees performing this work. For example, if you have 3 seasonal employees performing monitoring work for 4 months out of the year, this would equate to 1 FTE (1/3 year x 3 employees).

**Table 1: Enter Funding and Employment (CFLR/N Funds Only)**

Enter Total Proposed Funding (For proposals and work plans, enter funding for 10 years; for annual reports, enter funding for 1 year)	1
Enter number of years for project implementation (Enter "10" for proposals and work plans; Enter "1" for annual reports)	2
Annual Project Funding	
Enter percent of this funding that is going to be used for contracted work within the impact area (see comment box for list of counties in your impact area).	3
Enter percent of this funding that is going to be used for Force Account Implementation & Monitoring	4
Totals -- must be less than or equal to 100%	
Enter Annual Force Account FTEs For Implementation & Monitoring	5

### Contract Funding Distributions (CFLR/N Funds Only)– Table 2

This section is where analysts will enter data regarding the distribution of partnership and contracted work to the various activities listed in Table 2. The distribution needs to be reported as a percentage and should sum to 100 percent or less. This allocation may differ for your two worksheets - the one for modeling for CFLR/N Funds only, and the full project, so consider making adjustments if those funds would be spent in a manner that differs from the total proposal allocation.

6. “Facilities, Watershed, Roads and Trails” – Box 6. This is the percent of total contracted funding for work on facilities, watershed, roads and trails.
7. “Abandoned Land Mines” – Box 7. This is the percent of contracted funding for work on abandoned land mines only.
8. “Ecosystem Restoration, Hazardous Fuels and Forest Health” – Box 8. This is the percent of contracted funding for ecosystem restoration, hazardous fuels and forest health work. Include projects here that are labor intensive and use little mechanization other than chain saws, pesticide sprayers, digging implements, etc. There should be no commercial products that result from these contracts.
9. “Contracted Monitoring (Does not include in-kind and volunteer contributions)” – Box 9. This includes all monitoring work that is contracted out. This does not include in-kind and volunteer contributions.
10. “Thinning and Biomass Harvesting” – Box 10. This is the percent of contracted funding for thinning and biomass harvesting. Include projects here that are less labor intensive and rely more on machines i.e. skidders, feller/bunchers, mastication, etc. This type of project includes commercial products.

**Table 2: Contract Funding Distributions: Enter Percent of Contracted Funding Applied to Categories Below (CFLR/N Funds Only)**

Description	Types of Products	Project Percent
Facilities, Watershed, Roads and Trails		6
Abandoned Mine Lands		7
Ecosystem Restoration, Hazardous Fuels and Forest Health	<b>No commercial products.</b> Primarily labor intensive, simple mechanical treatments such as thinning with chain saws, piling and burning, etc.	8
Contracted Monitoring (Does not include in-kind and volunteer contributions)	Services Contracted for monitoring	9
Thinning and Biomass Harvesting	<b>Includes commercial products (also commercial firewood).</b> Includes chipping in the woods and mechanical treatments such as commercial logging, mastication, etc.	10
Totals -- must be less than or equal to 100%		0%

**Amount of Harvest Volume (CFLR/N Funds Only) – Table 3**

In the CFLRP an emphasis is placed on wood utilization so wood products will be harvested as a byproduct of restoration activities. In this section on Tab 1, you should only report the volume of wood products that would be removed during the life of the project as a result of the CFLR/N funding portion of the project. TREAT will automatically reduce this volume to annual averages, depending on how many years you select in Box 2, so that impacts are based on annual activities. If you are preparing data for an annual report, provide the volume that was harvested that fiscal year and set years to 1. If modeling a time period longer than a single year, for example the life of the project (such as project proposals), enter the volume for the applicable period (e.g. volume for FY 2012-2019 and enter the number of years (be careful to count the years and not subtract the



two dates, in this case FY2012 to FY 2019 is 8 years). (Note: If you need CFLR Fund money to make restoration projects viable, consider entering a proportion of the total volumes that represents the CFLR fund portion of your total proposal). Total volumes should be reported in CCF, MBF, Dry Tons and/or Cords in boxes 11, 12, 13 and 14 in Table 3.

**Table 3: Enter amount of harvest volume, if any, that will be produced by the project (CFLR/N Funds Only)**

CCF	11
MBF	12
Dry Tons	13
Cords	14
Total CCF==>	
Annual Total CCF==>	

#### Product Distributions – Table 4

Timber removed during restoration activities as commercial products will be processed into various types of consumer products. Different consumer products have different supply chain events that take place as the timber moves from the forest to the market place. These supply chain events take place in different sectors, and therefore have different effects as modeled in TREAT. It is therefore important to report the distribution of products that are processed from the volume removed during the restoration strategy. Only primary processors in the impact area should be counted. Table 4 shows a variety of manufacturers and the types of products they produce. In Boxes 15-28, report the percent of volume harvested that would be processed in each of these categories (zero is a valid entry). The percentages will sum to less than 100% if some of the volume harvested is shipped out of the impact area for processing.

**Table 4: Product Distributions: Enter Percent of Harvest Processed by Firms Based in Model Area**

Description	Types of Prdts Shipped	Volume Percent
Sawmills and wood preservation	lumber, bolts, woodchips, pallets, posts, poles, pressure and creosote treated lumber	15
Veneer and plywood manufacturing	veneer, plywood	16
Engineered wood member and truss manufacturing	various engineered products, trusses	17
Reconstituted wood product manufacturing	particleboard, fiberboard, hardboard, OSB	18
Wood container and pallet manufacturing	wood boxes, flats, baskets, casks, crates and pallets	19
Prefabricated wood building manufacturing	residential/ farm bldgs, sections, & panels	20
All other miscellaneous wood product manufacturing	wood dowels, wood handles, toothpicks	21
Pulp Mills	pulp only	22
Paper Mills	paper of all types	23
Paperboard Mills	paperboard	24
Paperboard Container Manufacturing	paper boxes, containers, cartons, tubes	25
Biomass--Cogen	electricity and heat	26
Firewood (Commercial)	commercial firewood	27
Firewood (Home Use)	firewood for home use	28
Totals -- must be less than or equal to 100%		

## *Tab 2: Full Project Details (All Funds)*

### Funding and Employment (All Funds) – Table 5

1. “Enter Total Project Funding” in Box 1. When modeling full project funding, include both CFLR/N funds as well as matching and partnership funds. For proposals and work plans, include all ten years of funding. For annual reports, include only funding for the year for which you are reporting. Matching funds consist of: Forest Service appropriated funds, Forest Service permanent trust funds, partnership funds, partnership in kind services, and other (if applicable).
2. “Enter the number of years for project implementation” in Box 2. This is the number of years that restoration activities will take place. For proposals and work plans enter the full implementation period (usually 10 years). For annual reports, enter “1”. (For instance, if using TREAT to model FY 2012 impacts, enter the Total funds for FY 2012 in Box 1 and “1” year in Box 2).
3. “Enter the percent of Total Funds reported in Box 1 that is going to be used for partnerships and contracted work within the impact area )...” – Box 3. This is the percent of total funds that will be spent on work completed by partners and contractors. A comment box is provided that lists the counties included within the impact area for your forest or forests. Only those firms located within this impact area should be included. Firms based outside the impact area will contribute to leakage. Leakage is money leaving the economy due to the import of goods and services. Purchasing a service from a partner or contractor outside of the region is the same as importing those services. Once that money leaves the economy then it is no longer available for circulation and may not generate additional jobs and income locally.
4. “Enter percent of the Total Funds that is going to be used for Force Account Monitoring” – Box 4. This is the percent of funding that will be spent on implementation and monitoring conducted by Forest Service employees. (Note: The sum of the percentages for numbers 3 and 4 must be less than or equal to 100 percent).
5. “Enter Annual Force Account FTEs for Implementation & Monitoring” – Box 5. This is the number of Forest Service employees per year that will be used for implementation and monitoring during the life of the project. Fractional employees may be reported. For example if one-half of an FTEs time will be spent on implementation and monitoring then the 0.5 should be entered. For seasonal employees, estimate the percentage of the year that each employee will be involved in implementation and monitoring and multiply times the number of seasonal employees performing this work. For example, if you have 3 seasonal employees performing monitoring work for 4 months out of the year, that would equate to 1 FTE (1/3 year x 3 employees).

**Table 5: Enter Funding and Employment (All Funds)**

Enter Total Proposed Funding (For proposals and work plans, enter funding for 10 years; for annual reports, enter funding for 1 year)	1
Enter number of years for project implementation (Enter "10" for proposals and work plans; Enter "1" for annual reports)	2
Annual Project Funding	
Enter percent of this funding that is going to be used for contracted work within the impact area (see comment box for list of counties in your impact area).	3
Enter percent of this funding that is going to be used for Force Account Implementation & Monitoring	4
Totals -- must be less than or equal to 100%	
Enter Annual Force Account FTEs For Implementation & Monitoring	5

### Contract Funding Distributions (All Funds) – Table 6

This section is where analysts will enter data regarding the distribution of partnership and contracted work to the various activities listed in Table 2. The distribution needs to be reported as a percentage and should sum to 100 percent or less. This allocation may differ for the full project (as opposed to what you entered in Tab 1), so consider making adjustments if the total funds would be spent in a manner that differs from the CFLR allocation.

6. “Facilities, Watershed, Roads and Trails” – Box 6. This is the percent of total contracted funding for work on facilities, watershed, roads and trails.
7. “Abandoned Land Mines” – Box 7. This is the percent of contracted funding for work on abandoned land mines only.
8. “Ecosystem Restoration, Hazardous Fuels and Forest Health” – Box 8. This is the percent of contracted funding for ecosystem restoration, hazardous fuels and forest health work. Include projects here that are labor intensive and use little mechanization other than chain saws, pesticide sprayers, digging implements, etc. There should be no commercial products that result from these contracts.
9. “Contracted Monitoring (Does not include in-kind and volunteer contributions)” – Box 9. This includes all monitoring work that is contracted out. This does not include in-kind and volunteer contributions.
10. “Thinning and Biomass Harvesting” – Box 10. This is the percent of contracted funding for thinning and biomass harvesting. Include projects here that are less labor intensive and rely more on machines i.e. skidders, feller/bunchers, mastication, etc. This type of project includes commercial products.

**Table 6: Contract Funding Distributions: Enter Percent of Contracted Funding Applied to Categories Below**

Description	Types of Products	Project Percent
Facilities, Watershed, Roads and Trails		6
Abandoned Mine Lands		7
Ecosystem Restoration, Hazardous Fuels and Forest Health	<b>No commercial products.</b> Primarily labor intensive, simple mechanical treatments such as thinning with chain saws, piling and burning, etc.	8
Contracted Monitoring (Does not include in-kind and volunteer contributions)	Services Contracted for monitoring	9
Thinning and Biomass Harvesting	<b>Includes commercial products (also commercial firewood).</b> Includes chipping in the woods and mechanical treatments such as commercial logging, mastication, etc.	10
Totals -- must be less than or equal to 100%		0%

**Amount of Harvest Volume (All Funds)– Table 7**

In the CFLRP an emphasis is placed on wood utilization so wood products will be harvested as a byproduct of restoration activities. In this section, you should report the volume of wood products that would be removed during the life of the project. TREAT will automatically reduce this volume to annual averages, depending on how many years you select in Box 2, so that impacts are based on annual activities. If you are preparing data for an annual report, provide the volume that was harvested that fiscal year and set years to 1. If modeling a time period longer than a single year, for example the life of the project (such as project proposals), enter the volume for the applicable period (e.g. volume for FY 2012-2019 and enter the number of years (be careful to count the years and not subtract the two dates, in this case FY2012 to FY 2019 is 8 years). Total volumes should be reported in CCF, MBF, Dry Tons and/or Cords in boxes 11, 12, 13 and 14 in Table 3.

**Table 5: Enter amount of harvest volume, if any, that will be produced by the project**

CCF	11
MBF	12
Dry Tons	13
Cords	14
Total CCF==>	
Annual Total CCF==>	

**Product Distributions – Table 8**

Timber removed during restoration activities as commercial products will be processed into various types of consumer products. Different consumer products have different supply chain events that take place as the timber moves from the forest to the market place. These supply chain events take place in different sectors, and therefore have different effects as modeled in TREAT. It is therefore important to report the distribution of products that are processed from the volume removed during the restoration strategy. Only primary processors in the impact area should be counted. Table 8 shows a variety of manufacturers and the types of products they produce. In Boxes 15-28, report the percent of volume harvested that would be processed in each of these categories (zero is a valid entry). The percentages will sum to less than 100% if some of the volume harvested is shipped out of the impact area for processing. (Note: this may be the same for Tabs 1 and 2).

**Table 8: Product Distributions: Enter Percent of Harvest Processed by Firms Based in Model Area**

Description	Types of Prdts Shipped	Volume Percent
Sawmills and wood preservation	lumber, bolts, woodchips, pallets, posts, poles, pressure and creosote treated lumber	15
Veneer and plywood manufacturing	veneer, plywood	16
Engineered wood member and truss manufacturing	various engineered products, trusses	17
Reconstituted wood product manufacturing	particleboard, fiberboard, hardboard, OSB	18
Wood container and pallet manufacturing	wood boxes, flats, baskets, casks, crates and pallets	19
Prefabricated wood building manufacturing	residential/ farm bldgs, sections, & panels	20
All other miscellaneous wood product manufacturing	wood dowels, wood handles, toothpicks	21
Pulp Mills	pulp only	22
Paper Mills	paper of all types	23
Paperboard Mills	paperboard	24
Paperboard Container Manufacturing	paper boxes, containers, cartons, tubes	25
Biomass--Cogen	electricity and heat	26
Firewood (Commercial)	commercial firewood	27
Firewood (Home Use)	firewood for home use	28
Totals -- must be less than or equal to 100%		

### Step 3: Send the completed data entry spreadsheet to the economists supporting the CFLR teams

Once data entry is completed, TREAT is submitted to one of the economists supporting the CFLR teams. After processing by the economist, the economic impacts of the restoration strategy will be reported in the worksheet (Tab 3 and Tab 4). The summary table from these worksheets may be cut and pasted directly into the proposal, work plan or annual report. As reported above, the jobs and labor income reported are a result of the direct, indirect and induced effects, and are assumed to last the life of the project or for the time period specified in Box 2 of the data entry sheet. Economic impacts are broken down by commercial forest products, other project activities, and Forest Service implementation and monitoring. Monitoring conducted by partnership agreement and contractors is accounted for in the other project activities. These are the jobs and income that would result from activities in each of those categories. Table 9 is an example of the summary table reported in this worksheet (in this case, a summary table for the CFLR/N Funds Only impacts). Under this restoration strategy a total of 15 jobs and \$750,000 in labor income are generated. If it is a 10 year restoration strategy then these jobs and income are assumed to last 10 years. If spending and/or volume are expected to change dramatically during the restoration strategy, then the number of jobs and length of the jobs will vary from year to year. How expected changes in funding and volume would affect these averages may be addressed qualitatively in the proposal. More advanced users with a background in regional economics may refer to the "Detailed Impacts Table" in this worksheet. The detailed table breaks down the impacts by direct, indirect and induced, and totals and provides greater detail on the types of jobs and labor income generated. For example, employment and income specific to biomass is broken out from the other commercial forest products. This allows for a more detailed look at the impacts summarized in Table 9.

**Table 9: Summary Table, TREAT Project Impacts (From CFLR/N Funds Only)**

	Employment (# Part and Full-time Jobs)	Labor Inc (2009 \$)
Commercial Forest Products	5.0	\$250,000
Other Project Activities	5.0	\$250,000
FS Implementation and Monitoring	5.0	\$250,000
<b>Total Project Impacts</b>	15.0	\$750,000

## Where to Get Help

TREAT is supported by the Service-Wide economics community. You may contact your Regional Economist, Social Science coordinator, or anyone on the development team. However, **please send your completed data entry sheets for the FY 2012 annual reports to both Krista Gebert and Keith Stockmann, as they will be conducting the analysis for all teams.**

Krista Gebert, Regional Economist (R1): ([kgebert@fs.fed.us](mailto:kgebert@fs.fed.us))

Keith Stockmann, Economist, (R1): ([kstockmann@fs.fed.us](mailto:kstockmann@fs.fed.us))

Susan Winter, Economist, WO EMC: ([swinter@fs.fed.us](mailto:swinter@fs.fed.us))

Doug Smith, Economist and Analyst, WO EMC: ([dsmith@fs.fed.us](mailto:dsmith@fs.fed.us))

## Summary

Impacts reported in TREAT are only as reliable as the data that is entered. Therefore when collecting data, care should be taken to ensure that it accurately reflects the activity that would occur under the restoration strategy. The data request sheets in Appendices A and B may be used to guide the data collection process.

## Appendix A: CFLR/N Fund Only TREAT Data

### Funding and Employment (CFLR/N Funds Only)

Enter information regarding CFLR/N Funding in the table below.

Total CFLR/N Funding (For proposals and work plans, enter funding for 10 years; for annual reports, enter funding for 1 year)	
Number of years for project implementation (Enter "10" for proposals and work plans; Enter "1" for annual reports)	
Percent of CFLR/N funding that is going to be used for contracted work within the impact area.	
Percent of CFLR/N funding that is going to be used for Force Account Implementation & Monitoring	
Annual Force Account FTEs For Implementation & Monitoring	

### Distribution of Contracted Funding (CFLR/N Funds Only)

Enter the percent of contracted funding used for the activities listed in the table below. This allocation is associated with CFLR Funds only, so consider making adjustments if those funds would be spent in a manner that differs from the total proposal allocation.

The sum of the percentages should be less than or equal to 100 percent:

Description	Types of Products	Project Percent
Facilities, Watershed, Roads and Trails		
Abandoned Mine Lands		
Ecosystem Restoration, Hazardous Fuels and Forest Health	No commercial products. Primarily labor intensive, simple mechanical treatments such as thinning with chain saws, piling and burning, etc.	
Thinning and Biomass Harvesting	Can include commercial products. Includes chipping in the woods and mechanical treatments such as commercial logging, mastication, etc.	
Contracted Monitoring (Does not include in-kind and volunteer contributions)	Services Contracted for monitoring	

## Harvest Volume over the Life of the Project (CFLR/N Funds Only):

Enter the volume of wood products that would be removed during the life of the project (or the time frame being modeled) as a result of the CFLR fund portion of the project. (If you need CFLR Fund money to make restoration projects viable, consider entering a proportion of the total volumes that represents the CFLR fund portion of your total proposal). Use only volume that will be removed from activities specific to this restoration strategy. Volume removed from adjacent NFS lands under a separate restoration strategy should not be included:

Unit of Measurement	Total Volume
CCF	
MBF	
Dry Tons	
Cords	

## Product Distributions

Enter the percent of harvested volume that will be processed into the types of products listed in the table below. Only those products produced by firms in the impact area should be accounted for. The sum of the percentages should be less than or equal to 100 percent:

Description	Types of Products Shipped	Percent of Total Volume
Sawmills and wood preservation	lumber, bolts, woodchips, pallets, posts, poles, pressure and creosote treated lumber	
Veneer and plywood manufacturing	veneer, plywood	
Engineered wood member and truss manufacturing	various engineered products, trusses	
Reconstituted wood product manufacturing	particleboard, fiberboard, hardboard, OSB	
Wood container and pallet manufacturing	wood boxes, flats, baskets, casks, crates and pallets	
Prefabricated wood building manufacturing	residential/ farm buildings, sections, panels	
All other miscellaneous wood product manufacturing	wood dowels, wood handles, toothpicks	
Pulp Mills	pulp only	
Paper Mills	paper of all types	
Paperboard Mills	paperboard	
Paperboard Container Manufacturing	paper boxes, containers, cartons, tubes	
Biomass--Cogen	electricity and heat	
Firewood (Commercial)	commercial firewood	
Firewood (Home Use)	firewood for home use	



## Appendix B: Full Project TREAT Data

### Funding and Employment (All Funds)

Enter information regarding All Funding in the table below.

Total CFLR/N Funding (For proposals and work plans, enter funding for 10 years; for annual reports, enter funding for 1 year)	
Number of years for project implementation (Enter "10" for proposals and work plans; Enter "1" for annual reports)	
Percent of CFLR/N funding that is going to be used for contracted work within the impact area.	
Percent of CFLR/N funding that is going to be used for Force Account Implementation & Monitoring	
Annual Force Account FTEs For Implementation & Monitoring	

### Distribution of Contracted Funding (All Funds)

Enter the percent of contracted funding used for the activities listed in the table below. This allocation is associated with All Funds.

The sum of the percentages should be less than or equal to 100 percent:

Description	Types of Products	Project Percent
Facilities, Watershed, Roads and Trails		
Abandoned Mine Lands		
Ecosystem Restoration, Hazardous Fuels and Forest Health	No commercial products. Primarily labor intensive, simple mechanical treatments such as thinning with chain saws, piling and burning, etc.	
Thinning and Biomass Harvesting	Can include commercial products. Includes chipping in the woods and mechanical treatments such as commercial logging, mastication, etc.	
Contracted Monitoring (Does not include in-kind and volunteer contributions)	Services Contracted for monitoring	

## Harvest Volume over the Life of the Project (All Funds):

Enter the volume of wood products that would be removed during the life of the project. Use only volume that will be removed from activities specific to this restoration strategy. Volume removed from adjacent NFS lands under a separate restoration strategy should not be included:

Unit of Measurement	Total Volume
CCF	
MBF	
Dry Tons	
Cords	

## Product Distributions

Enter the percent of harvested volume that will be processed into the types of products listed in the table below. Only those products produced by firms in the impact area should be accounted for. The sum of the percentages should be less than or equal to 100 percent:

Description	Types of Products Shipped	Percent of Total Volume
Sawmills and wood preservation	lumber, bolts, woodchips, pallets, posts, poles, pressure and creosote treated lumber	
Veneer and plywood manufacturing	veneer, plywood	
Engineered wood member and truss manufacturing	various engineered products, trusses	
Reconstituted wood product manufacturing	particleboard, fiberboard, hardboard, OSB	
Wood container and pallet manufacturing	wood boxes, flats, baskets, casks, crates and pallets	
Prefabricated wood building manufacturing	residential/ farm buildings, sections, panels	
All other miscellaneous wood product manufacturing	wood dowels, wood handles, toothpicks	
Pulp Mills	pulp only	
Paper Mills	paper of all types	
Paperboard Mills	paperboard	
Paperboard Container Manufacturing	paper boxes, containers, cartons, tubes	
Biomass--Cogen	electricity and heat	
Firewood (Commercial)	commercial firewood	
Firewood (Home Use)	firewood for home use	